

€ TRAINING

Process Plant Start up and Commissioning





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Introduction:

This training program prepares participants to oversee the successful start-up and commissioning of process plants. Emphasizing systematic approaches, best practices, and safety protocols, this program empowers them to manage complexities effectively, enhancing plant reliability and operational performance.

Program Objectives:

By the end of this program, participants will be able to:

- Understand the fundamental phases and principles of process plant start-up and commissioning.
- Implement systematic approaches and best practices for pre-commissioning and commissioning activities.
- Apply safety protocols, risk management strategies, and operational readiness assessments during start-up phases.
- Optimize plant reliability, minimize downtime, and enhance operational performance.
- Foster effective teamwork and leadership skills essential for successful plant start-up and commissioning.

Program Outlines:

Unit 1:

Fundamentals of Process Plant Start-up:

- Introduction to Process Plant Start-up: Objectives and Phases.
- Planning and Preparation: Safety Precautions, Risk Assessment, and Operational Readiness Reviews ORR.
- Regulatory Compliance and Permitting.
- Roles and Responsibilities of Start-up Teams.
- Documentation Requirements for Start-up Procedures.

Unit 2:

Pre-commissioning and Mechanical Completion:

- Overview of Pre-commissioning Tasks and Checklists.

- Mechanical Completion and Integrity Checks.
- Piping and Instrumentation Checks P&ID Verification.
- Equipment and System Inspections.
- Readiness Criteria for Mechanical Completion.

Unit 3:

Commissioning Procedures:

- Commissioning Plans and Procedures.
- System Functional Testing and Validation.
- Instrument Calibration and Performance Checks.
- Start-up of Process Equipment and Systems.
- Verification of Operating Limits and Conditions.

Unit 4:

Operational Readiness and Handover:

- Operational Handover and Transition.
- Training and Competency Development.
- Documentation, Record Keeping, and Reporting.
- Post-Commissioning Monitoring and Support.
- Evaluation of Operational Readiness Criteria.

Unit 5:

Continuous Improvement and Safety:

- Lessons Learned and Continuous Improvement.
- Safety Reviews and Emergency Response Planning.
- Long-term Operational Planning and Optimization.
- Maintenance Planning and Reliability Strategies.
- Integration of Feedback for Process Enhancement.

